FOX RIVER CURRENT

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Fox River Trustee Council Approves 2005 Projects

By Greg Swanson, Wisconsin Department of Natural Resources

Eight natural resource restoration projects totaling $4.8 million were approved for this year by the Fox River/Green Bay Natural Resource Trustee Council at its January 11 meeting in Keshena, Wis.

An important aspect of the projects is the use of matching funds and services to enhance the viability and scope of the projects. Seven of the eight projects involve matching funds. Since project funding began in 2002, nearly $12.8 million in matching funds and services have been added to the $24.6 million in natural resource damage assessment settlement funds committed to restoration projects.

PHOTO COURTESY OF U.S. FISH AND WILDLIFE SERVICE

This type of wetlands along the west shore of Green Bay is important for ducks and geese and young northern pike.

According to Bruce Baker, Wisconsin Department of Natural Resources representative on the council, "By being able to use NRDA funds to match funding from other sources, the agencies and our local governmental and other partners can accomplish projects that any single funding source would have difficulty putting together."

The funds being used by the council come from NRDA settlements reached with Appleton Papers, Inc./NCR Corp., Georgia-Pacific, Glatfelter, and WTM I Co. (formerly Wisconsin Tissue Mills). The projects are:

- A $1 million restoration project that will protect approximately 600 acres of bottomland hardwood forest and wetlands in the Lower Wolf River Bottomlands Natural Resources Area. The acquisition of land and conservation easements in this project area will reduce the affects of rural residential development to the watershed. It will also provide for the improved and continued production of waterfowl, heron, egrets and other fish-eating birds and spawning habitat for walleye and northern pike. Matching Wisconsin State Stewardship funds of approximately $1 million have been requested for the project.
- A $200,000 wetlands restoration project in the Wolf River Bottoms Wildlife Area to provide improved habitat (homes) for waterfowl and state-threatened species such as osprey and great egrets. The funds will be used to renovate the dike system in the wildlife area that is used to maintain adequate water levels for the benefit and protection of the waterfowl that use the wildlife area.
- A $881,000 habitat protection project along the west shore of Green Bay that will protect

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approximately 380 acres of critical habitats. These areas have been identified as significant areas for waterfowl nesting and resting as well as for fish spawning habitat. Federal and state matching funds will be requested to complete this project.

- A $626,000 habitat protection project in Door County that will protect about 85 acres of wetlands, streams and stream banks (riparian) and upland habitat. The project will also improve and restore breeding habitat along the east shore of Green Bay for northern pike and other fish species. Matching Wisconsin State Stewardship funds of approximately $219,000 have been requested for the project.
- A $1 million island habitat protection project that would restore and protect important island habitat. It supports waterfowl and nesting water birds that have been injured by the release of PCBs into the environment. Federal and state funds will be requested to complete this project.
- A $400,000 habitat protection project that will protect approximately 140 acres of wetlands and creek bank areas along Baird Creek, including the Greenway, a forested corridor within the city of Green Bay. The Baird Creek Preservation Foundation will be expected to raise matching funds to complete this project.
- A $200,000 northern pike habitat restoration project in the Suamico and Little Suamico watersheds. The project will establish permanent conservation easements to create buffers along streams in the watersheds that have high potential for spawning and rearing areas for northern pike. Staff and staff time for the project are being provided by the Brown County Land Conservation Department.
- A $500,000 restoration project that will protect approximately 200 acres of wetlands along the Upper Fox River in Waushara and Winnebago counties. These wetlands will become part of the U.S. Fish and Wildlife Service Waterfowl Production Area. It will be managed as part of the National Wildlife Refuge System to provide opportunities for waterfowl breeding, nesting and as a migratory stopover. The land will be open to the public for hunting, fishing, wildlife observation, photography, environmental education and interpretation activities. Matching federal funds will be provided to complete this project.

"It is wonderful to see good restoration projects brought to the trustee council for approval," stated Charlie Wooley, FWS representative to the council. "The restoration projects we and our partners have developed will provide important habitat for natural resources injured from PCBs, and to the Green Bay watershed as a whole."

The council manages the restoration activities, including the selection and management oversight of projects, as a result of the NRDA claim for the Lower Fox River and Green Bay PCB cleanup.

The trustee council is composed of DNR, FWS, Oneida Tribe of Indians of Wisconsin, Menominee Indian Tribe of Wisconsin, Michigan Attorney General, Michigan Department of Natural Resources and Michigan Department of Environmental Quality.

More information on restoration and the projects that have been approved since 2002 can be found on the DNR Fox River/NRDA Web site at: www.dnr.wi.gov/org/water/wm/lowerfox/nrda.html or the FWS Web site: www.fws.gov/midwest/nrda/index.html.

PHOTO COURTESY OF U.S. FISH AND WILDLIFE SERVICE

Woodlands like these will be preserved for waterfowl nesting and raising of young. These wetlands may also be important for spawning northern pike.

DNR, EPA Complete Several Lake, River Studies

By Susan Pastor, U.S. Environmental Protection Agency

Several studies for the Little Lake Butte des Morts cleanup, as well as the rest of the river and Green Bay, are being wrapped up and will be available to the public this spring.

The 2004 Completion Report for Operable Unit 1 (Little Lake Butte des Morts) will be the basis for a spring public meeting in the Neenah/Menasha area and describes results from last year's work in Little Lake Butte des Morts. It includes descriptions on:

- how the geotubes worked when separating water from sediment dredged from the lake
- how the dredge performed when digging sediment from the lake's bottom
- how the on-site treatment plant operated while cleaning the water and returning it to the river.

The report will also illustrate how air monitoring, surface water (water that was in the river near the dredge), and treated water that was discharged back to the river, met state requirements. It will show remaining PCB levels in areas where dredging was done. If PCBs are below cleanup standards, those areas will be deemed complete. However, if they are high, those areas would be further dredged or covered with sand.

The Basis for Design Report for Operable Unit 1 includes maps showing where to dredge this year and into the future. It also provides technical information about the sediment (moisture content and grain size, for example) that will help plan dredging and sediment handling methods.

According to EPA Remedial Project Manager Jim Hahnenberg, these reports are typically done to show progress made as well as improvements that may be needed. "Last year was kind of a shake-down period," he said. "Contractors were testing equipment and processes in 2004. Now, they are using the results to make the whole process more efficient."

Hahnenberg added that dredging operations were among the lessons learned. "A difference between this year and last year is that two dredges will be used 24 hours a day, six days a week," he continued. "Last year, there was only one dredge working 16 hours per day, six days a week. Everything will be very similar to last year, but work will be going on in two different areas on the lake. This will allow the removal rate to be doubled and the project completed in half the time that it would have otherwise taken."

The agencies are also working toward completing a third document, the Basis for Design for Operable Units 2-5 (the remaining stretches of the river and Green Bay). This report outlines where dredging would be needed based on previous sediment sampling. It also describes where and how to monitor other parts of the river and where to take more water, fish and bird samples this summer.

"You want to establish conditions before the cleanup occurs," explained Hahnenberg. "This is also referred to as background. This is what you compare to after the cleanup is finished. It's a reference point that tells you if you got good results in protecting the environment."

DNR Unveils Revamped Fox River Web Pages

By Kelly Mella, Wisconsin Department of Natural Resources

The cleanup of the Fox River is a project that sees a lot of changes from year to year, and sometimes, even from day to day. To keep up with that rapid pace, Wisconsin Department of Natural Resources recently revised and updated the pages of its Web site devoted to the Fox River cleanup. The new and improved pages are expected to be available to the public in late February or early March, and can be found at http://www.dnr.state.wi.us/org/water/wm/foxriver/index.html.

The main goal of the upgrade was to make information about the cleanup easier for the public to access and understand. To that end, much of the existing content was rewritten to be more clear and concise, and the site was completely reorganized to be easier to navigate. A second major goal was to bring the information on the

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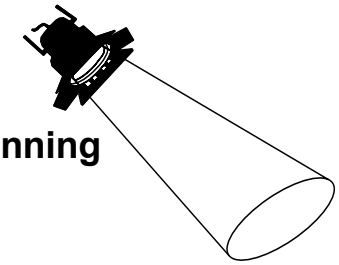
The Fox River Current is featuring promising natural resource damage assessment projects in and near the Lower Fox River.

Spotlight On:



Lake Sturgeon Habitat Assessment for Future Restoration Planning

By Colette Charbonneau, U.S. Fish and Wildlife Service

Coordination among U.S. Fish and Wildlife Service, Wisconsin Department of Natural Resources and Purdue University led to the development of a lake sturgeon habitat (home) assessment in the tributaries of Green Bay and northern Lake Michigan. Completion of this project will provide necessary information to prioritize lake sturgeon habitat preservation, restoration and enhancement work into the future. Fisheries biologists need the information to focus restoration efforts on the most productive lake sturgeon areas. The project is funded by the Fox River/Green Bay Natural Resource Trustee Council, Great Lakes Fishery Trust and Purdue University.

PHOTO COURTESY OF U.S. FISH AND WILDLIFE SERVICE

Lake sturgeon over potential spawning habitat.

Co-funded with natural resource damage assessment restoration settlement money, the project measured different habitat characteristics above and below dams in tributaries of Green Bay and the Manistique River in Lake Michigan during the spring and summers of 2004. This will continue in 2005. Green Bay tributaries include the Fox, Oconto, Peshtigo, Menominee, Escanaba, Suamico and Pensaukee Rivers. Water depth, speed of the river current, water temperature, dissolved oxygen in the water needed for fish to breathe, and turbidity (sediment and other particles stirred up in the water) are a few of the measurements that will be recorded in known current and historic sturgeon habitats. This will be done in areas where experts believe sturgeon may choose for feeding, spawning and nursery areas (places where young fish can survive).

All of this information will be used to make maps of available and potentially available habitats for lake sturgeon in each tributary. The maps will then be used by sturgeon experts for ranking:

- size, type and quality of habitat found
- if the habitat can be enhanced or restored
- if the fish can reach the habitat by not swimming against or into existing barriers such as dams.

Rob Elliott, FWS fisheries biologist explained the importance of understanding this complex fish. “By increasing our understanding of habitat availability and quality for all lake sturgeon life stages, it is anticipated that the results of the project will lead to the development of a decision-making tool that will direct future planning and implementation of lake sturgeon habitat enhancement and restoration efforts.

Lake sturgeon are known as relics from the dinosaur age. They are non-bony fish with bony plates along the body instead of scales. They also have a flexible rod called a notochord in place of a spine, a long snout and a tubular mouth, with no teeth, far back on their

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undersides. Lake sturgeon eat snails, insect larvae, leeches, small clams, mussels, crayfish and fish. They typically suck up food from the bottom of large shallow lakes and rivers and the Great Lakes coastal waters where they prefer to live. In the United States, Wisconsin and Michigan have some of the largest remaining populations of this fish.

The largest and oldest fish in Wisconsin and Michigan are, in fact, lake sturgeon. They can live up to 150 years old, grow to over eight feet in length and weigh over 200 pounds. Female lake sturgeon do not sexually mature until they are 20 to 25 years old. They spawn (release eggs) only once every four to six years. Male lake sturgeon mature around 15 years old and spawn every other year. For these reasons, this fish has a low reproductive rate. It can take many generations to recover from human intervention. Other reasons for the decline of this type of fish include overfishing, pollution, and construction of dams which blocks movement to spawning areas and destroys their homes.

Early settlers quickly realized the economic value of the fish making sturgeon eggs into caviar and selling the succulent flesh smoked or fresh. A gelatin extracted from the sturgeon's swim bladder was used to make jams and jellies and to clarify alcoholic beverages. The state of Wisconsin established a minimum size limit in 1903. Commercial harvest in Lake Michigan was closed in 1929. Highly restrictive fishing regulations for sturgeon continue today. Numbers of lake sturgeon began to increase in some river systems in Wisconsin, however, they are still rare in Lake Michigan including Green Bay.

Improvements in water quality and harvest reductions have allowed for some recovery of the fish in Lake Michigan but limited availability of spawning and nursery areas in historically important tributaries is a major problem.

"The assessment of past and present habitat availability is necessary to prioritize efforts to replace, enhance or renew accessibility to habitats for successful restoration of the species," Elliott added.

The natural resource trustees are comprised of FWS, DNR, Oneida Tribe of Indians of Wisconsin, Menominee Indian Tribe of Wisconsin, Michigan Attorney General, Michigan Department of Environmental Quality, Michigan Department of Natural Resources and National Oceanic and Atmospheric Administration.

For further information on NRDA projects, contact Trustee Council Coordinator Colette Charbonneau, FWS, at Colette_Charbonneau@fws.gov or at (920) 866-1726.

Out and About...

By Susan Pastor, U.S. Environmental Protection Agency

The Fox River Intergovernmental Partnership is made up of U.S. Environmental Protection Agency, Wisconsin Department of Natural Resources, U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration, Oneida Tribe of Indians of Wisconsin and Menominee Indian Tribe of Wisconsin. These partners, as well as other supporting agencies, regularly provide speakers to organizations in the Fox Valley area. The following people recently made presentations:

January

- *Jim Hahnenberg* and *Susan Pastor*, EPA and *Colette Charbonneau*, FWS: Einstein Science Expo, Green Bay; informational booth on general Lower Fox River cleanup and restoration projects.

Profile On ... Jeff Kreider

DNR water resources engineer brings programming expertise to Fox River cleanup

By Kelly Mella, Wisconsin Department of Natural Resources

Jeff Kreider never expected to be working in water resources when he was studying ceramic engineering at the University of Illinois. But when he was nearly ready to graduate, he applied for a job with Wisconsin Department of Natural Resources and got it due to his extensive background in chemistry and computer programming. He's been with DNR ever since—14 years so far.

Kreider's first projects for DNR involved analyzing existing wasteload allocations for several segments of the Wisconsin River. A wasteload allocation determines the maximum limit set on the amount of discharge that can be put into a river and is meant to protect the river from pollution. It was Kreider's job to verify that existing wasteload allocations were still appropriate and were achieving the goal of keeping the river clean and healthy, and to help revise them if necessary.

In the mid-1990's, Kreider's evolving job duties brought him to the Fox River cleanup team.

"One of the things I like best about working on the Fox River cleanup is the diversity of projects," he says. "I've had the opportunity to do a lot of different things and that keeps my job interesting."

When he first started working on the Fox River cleanup project, Kreider was involved in sediment mapping for the Fox and other rivers in the state. He also developed the initial GIS sediment maps of the Fox River. Currently, he serves as the keeper of the Fox River database, an electronic repository for all data collected on the river. He is also the project lead to develop an electronic information management system for the Fox River cleanup that will include all data, documents, photos, etc. relating to the project. The EIMS will be searchable and available for public use.

Another of the many Fox River hats Kreider wears is that of designer and manager of the original Fox River cleanup Web pages on the DNR Web site. He continues to manage the pages today and is a vital contributor to their redesign and update, an odious task which is nearly completed (see related story in this issue of *The Current*).

Jeff Kreider

"I'm pleased with the way the new Web pages are coming together," Kreider says. "The cleanup is a very complicated project and it's always changing, but we think the new Web page design will make it easier for people to find the information they need and easier for us to keep the pages updated."

A final role Kreider plays in the Fox River cleanup is as a member of the vitrification review team for DNR. He says his background in ceramic engineering comes in handy for this part of the project.

In addition to his multiple Fox River duties, Kreider also has to keep up with the rest of his DNR job. One of his specialties is developing, maintaining, and using computer models for watersheds. Right now he's working on a model that evaluates barnyard runoff.

What does Kreider like to do when he's not working? Work, of course! In his non-DNR time, he manages college wrestling tournaments and mentors high school students. He also writes computer software for handling wrestling statistics and managing wrestling tournaments.

"The wrestling work is fun because I get to travel a lot and meet and work with people who've been in the Olympics and the world championships," he relates. "My claim to fame is that I know Olympic gold medalists."

Kreider also likes to spend time with his wife Linda and their two children, Nicole and Nate.

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pages up to date and keep it that way—no small feat with such a complicated project.

"This is a very complex project and things are changing all the time," said Greg Swanson, DNR public affairs manager. "We want to make sure the public is in the loop with what's going on, and we hope these new Web pages will help us do that."

While the revamped pages may look much the same as the old ones, a quick perusal will reveal many improvements. The new pages are divided into nine main sections:

- News, which provides direct links to DNR press releases from the current year and links to searchable archives for past years' releases.
- Fox River Background, which includes geographical and ecological information about the Fox River and Green Bay.
- PCB Contamination, which explains what PCBs are, how they got into the Fox River, and what effects they have.
- Cleanup, with an overview subsection that briefly explains the history of the cleanup project and how we got to where we are today, and additional subsections that cover current cleanup activities, the demonstration projects, and cleanup alternatives.
- Natural Resources Restoration, which provides links to information about Fox River NRDA-funded projects and information on the trustee council.
- Public Involvement, where public meetings, open houses and other outreach opportunities will be listed when they occur.
- Fox River Current Newsletter, which links to the EPA Web site.
- Reports & Documents, which houses all the Fox River cleanup-related technical and legal documents DNR has made available on the Web, reorganized to be easier to navigate.
- Contacts & Links.

The DNR Fox River cleanup team hopes the new Web pages will be useful for both interested citizens and colleagues directly involved in the cleanup process, and welcomes feedback. Please take a look at the pages and contact Kelly Mella (mellak@dnr.state.wi.us) with suggestions.

Check out these Web sites:

http://dnr.wi.gov/org/water/wm/lowerfox/

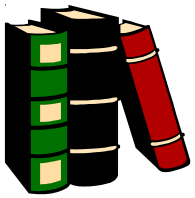
http://www.epa.gov/region5/sites/foxriver/

http://contaminants.fws.gov/Issues/Restoration.cfm

http://www.fws.gov/midwest/nrda/index.html

Information Available at Local Libraries

The Intergovernmental Partners invite the public to review technical reports, fact sheets and other documents related to the Lower Fox River cleanup at information repositories set up in the reference sections of the local libraries listed below. Information repositories at the public libraries in De Pere, Kaukauna, Little Chute, Neenah and Wrightstown have been discontinued. However, binders containing fact sheets are being maintained at these locations as well as at the following repositories:



- **Appleton Public Library**, 225 N. Oneida St., Appleton, Wis.; (920) 832-6170
- **Brown County Library**, 515 Pine St., Green Bay, Wis.; (920) 448-4381, Ext. 394
- **Door County Library**, 107 S. Fourth Ave., Sturgeon Bay, Wis.; (920) 743-6578
- **Oneida Community Library**, 201 Elm St., Oneida, Wis.; (920) 869-2210
- **Oshkosh Public Library**, 106 Washington Ave., Oshkosh, Wis.; (920) 236-5205

An administrative record, which contains detailed information upon which the selection of the final site cleanup plan was based, is also available for review at two DNR offices: 801 E. Walnut St., Green Bay, Wis. and 101 S. Webster St., 2nd Floor, Madison, Wis. An administrative record is also available at the EPA Record Center, 77 W. Jackson Blvd., 7th Floor, Chicago, Ill.

Prepared by the Fox River Intergovernmental Partnership: Wisconsin Department of Natural Resources, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, Menominee Indian Tribe of Wisconsin, Oneida Tribe of Indians of Wisconsin, and National Oceanic and Atmospheric Administration. Supporting agencies include Wisconsin Department of Health and Family Services, U.S. Agency for Toxic Substances and Disease Registry, and U.S. Army Corps of Engineers.

Disclaimer: The opinions expressed in these articles are solely those of the authors and are not necessarily shared by all members of the Fox River Intergovernmental Partnership.

INSIDE FOX RIVER *CURRENT*

Fox River Current is published bimonthly by the Fox River Intergovernmental Partnership. Its purpose is to provide up-to-date information about cleanup and restoration efforts on the Lower Fox River. Call Greg Swanson at (608) 264-6024 to request a subscription or alternative format. Feedback on articles and ideas for future issues are welcome. Send comments to Greg Swanson, *Fox River Current*, DNR, CE/8, P.O. Box 7921, Madison, WI 53707 or e-mail <gregory.swanson@dnr.state.wi.us>

Office of Public Affairs (P-19J)
United States Environmental Protection Agency
Region 5
77 W. Jackson Blvd.
Chicago, IL 60604-3590